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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/998,552 | 11/29/2001 | Randy D. Cortright | 09820.191 | 5895 |

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EXAMINER

LANGEL, WAYNE A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1754

DATE MAILED: 02/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

998552

Applicant(s)

Cortright et al

Examiner

Langel

Group Art Unit

1754

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-56 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☒ Claim(s) 25-44 and 51-56 is/are allowed.
- ☒ Claim(s) 1-3, 5-14, 18, 19 and 45-49 is/are rejected.
- ☒ Claim(s) 4, 15-17, 20-24 and 50 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit 1754

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-14, 18, 19 and 45-49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wieland et al. in view of Edlund '137. Wieland et al. disclose a method for steam reforming of alcohols, which contains a palladium/zinc alloy and zinc oxide as catalytically active components. The alloy catalyst is deposited on aluminum oxide or a zeolite. (See the Abstract and column 4, line 59 - column 5, line 58.) Wieland et al. disclose in Tables 1, 2 and 3 that the reforming temperature ranges from 250 to 400°C. The difference between the process disclosed by Wieland et al., and that recited in claims 1-3, 5-14, 18, 19 and 45-49, is that Wieland et al. do not specifically disclose that the alcohol should have at least two carbon atoms. Edlund '137 discloses a method for steam reforming of alcohols, and teaches at column 1, lines 15 and 16 that the alcohol may be ethanol. It would be prima facie obvious from Edlund '137 to reform ethanol in the process of Wieland et al.,

Art Unit 1754

since Edlund '137 establishes the equivalence between the steam reforming of methanol and ethanol, and the method of Wieland et al. is broadly directed to reforming any alcohol, with methanol merely being exemplified. (See column 1, lines 4-23 of Wieland et al.)

Claims 4, 15-17, 20-24, and 50 are objected to as based on a rejected parent claim, and would be allowed if written in independent form.

Claims 25-44 and 51-56 are allowed.

Shikada et al. and Topsoe et al. are made of record for disclosing a method for producing hydrogen by reacting dimethyl ether and water vapor in the presence of a Group VIII metal catalyst.

Autenrieth et al. '992, Autenrieth et al. '701 and Lin et al. are made of record for disclosing methods for steam reforming of methanol in the presence of a palladium catalyst.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (703) 308-0248. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can

Serial No. 09/998,552

-4-

Art Unit 1754

be reached on (703) 308-3837. The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2351.

WAL:cdc

February 12, 2003

Wayne A. Langel
WAYNE A. LANGEL
PRIMARY EXAMINER